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Claims

What is claimed is:

1.   A data storage device in a form factor assembly not greater than three and one half inches comprising:

a data disc rotatably mounted on a baseplate;

an actuator arm adjacent to the data disc carrying a transducer for reading data from and writing data to the data disc;

a printed circuit board (PCB) fastened to the baseplate having a servo controller in operable communication with the actuator arm for moving the actuator arm over the data disc;

a central processing unit (CPU) connected to the PCB generating control signals to the servo controller and running an operating system; and

memory storing an application program operably connected to the CPU, whereby the application program is run by the CPU.

2.   The data storage device of claim 1 wherein the data storage device is connected to a communications network, further comprising:

an input/output module communicating to a node connected to the communications network.

3.   The data storage device of claim 2 wherein the input/output module includes a network interface module operable to communicate to a node on the network using a hypertext transport protocol.

4.   The data storage device of claim 3 wherein the input/output module further includes a video interface module operable to drive a video monitor via the communications network.

5.   The data storage device of claim 4 wherein the data storage device is a three and one half inch form factor assembly.

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6.   The data storage device of claim 5 further comprising a file system managing file data stored on the data disc, wherein the file system is in direct communication with the servo controller.

7. A computer system comprising:

a docking station having a connector port for receiving a data storage device; and

a data storage device having a microprocessor, a memory storing an operating system operably connected to the microprocessor operable to execute application programs, whereby the microprocessor executes the operating system, an input/output module operably connected to a communications network, and a data storage disc, the data storage device connected to the connector port.

8. The computer system of claim 7 wherein the docking station includes a connection to a communications network.

9. The computer system of claim 7 wherein the input/output module operably communicates with a node on the communications network using a hypertext transport protocol.

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10.   A method of distributing computer processing tasks comprising steps of:

connecting a plurality of intelligent storage elements to a communications bus, wherein each intelligent storage element comprises a microprocessor, a connector port, an input/output module, a data disc, and a servo controller for reading from and writing to the data disc;

assigning tasks to each of the plurality of intelligent storage elements; and

distributing data among the plurality of intelligent storage elements based on the assigning of tasks.

11.   The method of claim 10 further comprising steps of:

determining if a primary master intelligent storage element has crashed; and

switching to a secondary master intelligent storage element if the primary master intelligent storage element has crashed.

12.   The method of claim 11 wherein the assigning step comprises steps of:

selecting a first application program;

assigning the first application program to a first intelligent storage element;

selecting a second application program; and

assigning the second application program to a second intelligent storage element.

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13.   A data storage device in a form factor assembly not greater than three and one half inches comprising:

a microprocessor executing application programs;

a data disc;

5   an actuator assembly rotatably mounted adjacent the data disc for positioning transducer heads relative to the data disc;

a servo control module controlling the actuator assembly;

a memory containing the operating system and operably connected to the microprocessor, whereby the microprocessor runs the operating system; and

10   a communication means operably connected to the microprocessor and the memory for communicating data stored on the data storage device to a node on a communications bus.

14.   The data storage device of claim 13 wherein the data storage device is connected to a communications network, further comprising:

15   an input/output module operable to receive data from a node on the communications network.

15.   The data storage device of claim 14 wherein the input/output module operably communicates with a node on the communications network using a hypertext transport protocol.

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